Product Brief

Accelleran E1000 Series Local Area Small Cells

LTE FDD or LTE TDD LOCAL AREA COVERAGE IN SMALLEST FORM FACTOR

Accelleran E1000 Series Outdoor Local Area is the solution to provide LTE FDD or LTE TDD outdoor network coverage in medium size office environments, venues, shopping centres, urban/suburban/rural and remote areas... providing carrier and mission-critical grade RAN engineering in a small (3.5 litres) form factor

EASE OF DEPLOYMENT

The E1000 Series Outdoor Local Area is designed to be easily and flexibly deployed by a normal user by just connecting an PoE+/Ethernet cable. Its Plug and Play capabilities do the rest.

LOWEST COST

For lowest cost solution the E1000 Series Outdoor Local Area supports a single 2x2 MIMO transceiver chain (cell) in different LTE FDD or LTE TDD bands and can optionally integrate embedded EPC functionality (Network-in-a-Box), Neutral Host (GWCN, MOCN) functionality or work in conjunction with Accelleran dRAX™ vRAN.

- LTE FDD or LTE TDD 3GPP Compliant Local Area Small Cells
- 1 transceiver per unit (single cell)
- 20 dBm/100 mW (FDD) or 24 dBm/250 mW (TDD) Tx power per antenna port
- 2x2 MIMO
- 5, 10, 15 & 20MHz Channels
- TDD Bands 38, 40, 41, 42, 43*, B48/CBRS*
- FDD Bands 3, 7 (Other bands on request)
- Integrated GNSS (GPS, GLONASS, BDS)
- Gigabit Ethernet Connectivity (PoE+)
- Neutral Host MOCN/MORAN/Slicing
- Optional Embedded EPC (Network-in-a-box)
- vRAN/MEC/5G Architecture Ready
- Flexible Remote Management Interface

PRODUCT DESCRIPTION

The E1000 Series is a small form factor Local Area LTE FDD or LTE TDD Small Cell, supporting by default a single cell capable of providing up to 100mW (FDD)/250mW (TDD) RF power per antenna port.

It is intended for deployment in enterprise, public urban and suburban scenarios, where typically a planned inside-out/outside-in deployment of Small Cells will complement macro coverage adding significantly to network capacity by offloading the macro and increasing the available coverage in the enterprises, venues, shopping centres, urban hotspots...or as a single layer ultra-dense Small Cell-only network. Alternatively, it can also be deployed for Fixed Wireless Access deployments in urban/suburban and in remote and rural scenarios.

- Its sleek appearance makes it very suitable for any type of environments. It is truly a carrier grade RAN network node with the skin and appearance of a normal router product.

- As a result of its flexible software architecture, the E1000 Series Outdoor is software upgradeable to support a roadmap of new features.

- The E1000 Series Outdoor offers great flexibility for backhaul connectivity via its 1Gbps Ethernet port

- **Best in Class Silicon**

The beating heart of the E1000 unit is the Cavium Octeon Fusion-M CNF7130 baseband processor which delivers unequalled processing power in a single SOC. Accelleran, as a leading vendor of Cavium-based solutions, is one of the first to bring products leveraging this new generation of silicon to the small cell market.

- **Carrier & Mission-Critical Grade Quality**

We insist on SW development standards and practices from the safety-critical industries in order to ensure our products deliver “five nine’s” reliability out of the box.

- **Flexibility for RAN & vRAN Deployment**

We have architected our solutions from the beginning with hardware platform independence in mind. The same software solution can be deployed from fully embedded RAN architecture to 5G disaggregated and virtualised vRAN.

- **Best-in-Class Manageability**

We understand the increasing demands for realtime insight into network performance and end user experience. We have engineered an open and flexible management platform designed to enable easy integration with standards-based or proprietary OSS, orchestration and SON systems.

The E1000 Series Local Area Small Cells for HetNets or for Fixed Wireless Access

ABOUT ACCELLERAN

The Accelleran team has been a recognized leader in the small cell industry for more than ten years. With an average experience of 20+ years each, the team offers unrivalled expertise across the full range of skillsets required for success in the challenging RAN solution market.

The E1000 is the result of the combination of Accelleran's expertise in carrier-grade RAN and vRAN software solutions with mass volume small cell HW platform manufacturers. The E1000 delivers an exceptional combination of features, performance, reliability and efficiency in the smallest form factor and offering the lowest Total Cost of Ownership in the market.

Mode	Band	Product
TDD	B42	E1010
	B43*	E1011
	B48/CBRS*	E1012
	B38/41	E1013
	B40	E1014
FDD	B7	E1020
	B3	E1021
	B1	E1022
Other bands on request		

Deploy the E1000 Series Outdoor Local Area in medium sized enterprise, venues, shopping centres, urban hotspots... to enable inside-out/outside-in HetNet or ultra-dense scenarios to cost effectively provide coverage and capacity, or in rural, suburban and remote scenarios to provide coverage. Whether you are deploying an isolated enterprise solution for your verticals, an integrated multiple layer network or an integrated single layer network with key interference cancellation techniques, you will always get the most out of the licensed and lightly licensed spectrum capabilities of your network.

E1000 Series Technical Specification

Single Cell LTE FDD or LTE FDD Local Area Small Cells

Transceiver Specification

- 2 x 2 MIMO
- Local Area Basestation Class
- 20dBm/100mW RF power per antenna port (FDD)
- 24dBm/250mW RF power per antenna port (TDD)
- 1 transceiver per unit (single cell)

Band Support

- LTE FDD Bands 3, 7
- LTE TDD Bands 38, 40, 41, 42, 43*, 48/CBRS*
- Other FDD and TDD Bands on request

*23 dBm/200 mW per antenna port

Network Interfaces

Layer 1 & 2

- 1 GBE port
- IPv4/IPv6

Layer 3 and OAM

- S1 or SGi (Network-in-a-Box)
- Type 1 OAM (TR-069/TR-196), Type 2 OAM (SNMP), Kuha, OAM Webserver or CLI SAS (CBRS)
- Alternative OAM interface possible (XML, Netconf, Proprietary)

LTE Feature Support

- 3GPP Release 9 (upgradeable to Release 10)
- Up to 64 active users
- LTE FDD or LTE TDD
- Integrated GNSS (GPS, GLONASS, BDS)
- Cell Selection/Re-selection
- Radio Bearer Control
- Admission Control
- Scheduler & Rate Control
- Neutral Host (MOCN, Slicing)
- Optional Embedded EPC (Network-in-a-box)
- vRAN/MEC/5G Architecture Ready
- OAM (CM, PM, FM, Diagnostics) & SON

Security

- 3GPP standard LTE air interface security
- IPSec AES encrypted tunnels on all network connections
- Trusted Platform technology embedded in silicon
- Per Device PKI key pairs
- Secure Boot through digital signatures of all executables

Power

- 56V PoE+
- <21W (Max Tx power, full data traffic)

Physical

- Dimensions: 270 x 200 x 65mm (3.5 litres)
- Ingress Protection: IP67

Environmental

- Weight : 2.8 Kgs
- Temperature: -40 to +50 ºC (operating)

FURTHER INFORMATION

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www.accelleran.com

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